

CLAIMS

What is claimed is:

1. A method for determining a whether a subject has a modified susceptibility to cardiovascular disease comprising: detecting in a nucleic acid sample from said subject at least one CETP allele selected from the group consisting of intron 1 (707); intron 8 (3707); intron 8 (3946); promoter (VNTR); insertion (307);  
5 intron 15 (493), wherein said CETP allele is associated with a modified level of CETP activity.

2. A method as defined in claim 1 wherein said cardiovascular disease is associated with low HDL.

3. A method as defined in claim 1 wherein said one or more alleles are selected from the group consisting of: intron 1 (707) allele 2; intron 8 (3707) allele 2; intron 8 (3946) allele 2; promoter (VNTR) allele 2; insertion (307) allele 2; intron 15 (493) allele 2, wherein detection of said allele indicates that the subject has a  
5 decreased predisposition to cardiovascular disease.

4. A method as defined in claim 1, wherein said detecting utilizes a technique selected from the group consisting of: a) allele specific oligonucleotide hybridization; b) size analysis; c) sequencing; d) hybridization; e) 5' nuclease digestion; f) single-stranded conformation polymorphism; g) allele specific  
5 hybridization; h) primer specific extension; i) oligonucleotide ligation assay; and j) RFLP analysis.

5. A method as defined in claim 1, further comprising amplifying the nucleic acid sample.

6. An isolated nucleic acid comprising at least 11 consecutive nucleotides of SEQ. ID. No: 6, 8, 10, 12 or 14 or a complement thereof.

7. An isolated nucleic acid comprising at least one GAAA repeat, or complement thereof, wherein said nucleic acid is amplified from the CETP promoter region corresponding to -2144 to -1974 nucleotides from the transcriptional start site.

8. An isolated nucleic acid as defined in claim 6 wherein said nucleic acid is useful for allele specific hybridization.

9. An isolated nucleic acid as defined in claim 6 wherein said nucleic acid is the product of amplification and is no larger than 5,000 nucleotides in length.

10. A kit, comprising: a means for detecting one or more alleles at a CETP locus selected from the group consisting of: intron 1 (707); intron 8 (3707); intron 8 (3946); promoter (VNTR); insertion (307); and intron 15 (493), and a first primer oligonucleotide that hybridizes 5' or 3' to one of said CETP loci.

11. A kit as defined in claim 10, further comprising a second primer oligonucleotide that hybridizes 5' or 3' to one of said CETP loci.

12. A kit as defined in claim 11, wherein said first primer and said second primer hybridize to the same CETP loci and wherein said first primer and said second primer hybridize to opposite sides of a region in the range of between about 50 and about 1000 base pairs.

13. A kit as defined in claim 10 wherein the detection means is selected from the group consisting of: a) allele specific oligonucleotide hybridization; b) size analysis; c) sequencing; d) hybridization; e) 5' nuclease digestion; f) single-stranded conformation polymorphism; g) allele specific hybridization; h) primer specific extension; i) oligonucleotide ligation assay; and j) RFLP analysis.

14. A kit as defined in claim 10 further comprising an amplification means.

15. A kit as defined in claim 10 further comprising a control.

16. A method for treating a patient, comprising: detecting at least one CETP allele in a nucleic acid sample from said patient, diagnosing a cardiovascular disorder, selecting at least one cardiovascular disorder therapeutic, and providing the cardiovascular disorder therapeutic(s) to the patient.

17. A method as defined in claim 16 wherein said CETP allele is from a locus selected from the group consisting of: intron 1 (707), intron 8 (3707), intron 8 (3946), promoter (VNTR), insertion (307), and intron 15 (493).

18. A method as defined in claim 16 wherein said CETP allele is a risk factor for said cardiovascular disorder and said therapeutic reduces the risk associated with the risk factor.

19. A method as defined in claim 16 wherein the patient is treated with a therapeutic that modulates CETP activity.

20. A method as defined in claim **19** wherein the patient is additionally treated with a therapeutic that modulates LDL levels.

21. A method as defined in claim **20** wherein the patient is additionally treated with an HMG CoA reductase inhibitor.

22. A method as defined in claim **16** wherein the patient is treated with a therapeutic that modulates LDL levels.

23. A method as defined in claim **16** wherein the patient is treated with an HMG CoA reductase inhibitor.

24. A method as defined in claim **16** further comprising identifying the presence of a risk factor for the cardiovascular disorder, and formulating a treatment plan that reduces an effect of the risk factor to the patient.

25. A method as defined in claim **24** wherein the treatment plan comprises an administration of a therapeutic agent that modifies the risk factor.

26. A method as defined in claim **16** wherein said detecting utilizes a technique selected from the group consisting of: (a) allele specific oligonucleotide hybridization; b) size analysis; c) sequencing; d) hybridization; e) 5' nuclease digestion; f) single-stranded conformation polymorphism; g) allele specific hybridization; h) primer specific extension; i) oligonucleotide ligation assay; and j) RFLP analysis.

27. A method as defined in claim **26** further comprising amplifying the nucleic acid sample.

28. A sample as defined in claim **16** wherein said therapeutic is a nucleic acid.

29. A method as defined in claim **28** wherein said nucleic acid encodes at least a bioactive portion of the CETP protein.

30. A method as defined in claim **28** wherein said nucleic acid integrates at the CETYP gene locus and affects CETP activity.

31. A method for identifying a cardiovascular disorder therapeutic comprising: contacting a subject carrying at least one CETP allele selected from the group consisting of: intron 1 (707), intron 8 (3707), intron 8 (3946), promoter (VNTR), insertion (307), and intron 15 (493), with a test substance, and determining the effect of said test substance on CETP activity.

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